National Infrastructure Protection Plan

Nuclear Reactors, Materials, and Waste Sector

Homeland Security Presidential Directive 7 (HSPD-7) identified 17 critical infrastructure and key resources (CI/KR) sectors and designated Federal Government Sector-Specific Agencies (SSAs) for each of the sectors. Each sector is responsible for developing and submitting Sector-Specific Plans and sector-level performance feedback to the Department of Homeland Security (DHS) to enable national cross-sector CI/KR protection program gap assessments. SSAs are responsible for collaborating with private sector security partners and encouraging the development of appropriate information-sharing and analysis mechanisms within the sector.

Sector Overview

Nuclear power accounts for approximately 20 percent of the Nation's electrical use, provided by 104 commercial nuclear reactors licensed to operate in the United States. The Nuclear Reactors, Materials, and Waste (Nuclear) Sector includes: nuclear power plants; non-power nuclear reactors used for research, testing, and training; nuclear materials used in medical, industrial, and academic settings; nuclear fuel fabrication facilities; decommissioning reactors; and the transportation, storage, and disposal of nuclear material and waste.

The Nuclear Sector has identified interdependencies with other CI/KR sectors, including:

- **Energy** as a supplier to the Nation's electrical grid;
- **Transportation Systems** through the movement of radioactive material;
- **Chemical** as related to hazardous chemicals at fuel cycle facilities;
- **Public Health and Healthcare** through nuclear medicine, radiopharmaceuticals, and sterilization of surgical supplies; and
- **Government Facilities** through Federal and State facilities that use radioactive material for various purposes.

Sector Partnerships

HSPD-7 assigned responsibility for the protection of the Nuclear Sector to DHS. Within DHS, the Chemical and Nuclear Preparedness and Protection Division will maintain responsibility for CI/KR protection of the sector in close cooperation with the Nuclear Regulatory Commission (NRC).

To plan and coordinate CI/KR protection efforts for the sector, DHS established government and private sector coordinating councils in 2004. These councils provide a structure through which representative groups from all levels of government and the private sector can collaborate and share approaches to CI/KR protection. The Government Coordinating Council consists of representatives from DHS, NRC, the Federal Bureau of Investigation, and the Department of Energy, and provides coordination of civilian nuclear security strategies and activities, policies, and communications across and between the government and the Nuclear Sector. The Nuclear Sector Coordinating Council consists of representatives from the nuclear industry who collaborate to share information and concerns regarding CI/KR protection.

CI/KR Protection Issues

Nuclear power accounts for approximately 20 percent of the electricity-generating capacity in the United States. Nuclear power plants are among the best defended and most physically hardened of the Nation's CI/KR, designed to withstand such extreme events as hurricanes, tornadoes and tornado-generated missiles, and earthquakes. While the loss of the electricity generated by a single nuclear power plant may have only a minor impact on the Nation's overall electrical capacity, a terrorist attack would be a significant security event, especially if a successful terrorist strike resulted in the release of radioactive material.

Ensuring continued safe operation of nuclear facilities is another concern of the Nuclear Sector. The NRC, established in 1974 by the Energy Reorganization Act, regulates commercial nuclear power plants and other sector facilities and activities. The NRC is responsible for licensing the construction and operation of nuclear power plants and other facilities, conducting inspections of these facilities, implementing and enforcing rules and regulations to ensure safe operations and prevent accidents and malicious acts, and developing a program of emergency preparedness and response.

Priority Programs

Protective programs in the Nuclear Reactors, Materials, and Waste Sector are operated by DHS and the NRC, which provides operations licenses and safety oversight. Some of the current programs include:

- **Comprehensive Review (CR) Program.** The CR program is a cooperative Federal, State, local, and private sector analysis of nuclear CI/KR facilities to determine the security and response capabilities of the facilities and their surrounding community. DHS coordinates this interagency effort and has set aside approximately $25 million in grant funds to address gaps identified through the CR assessment process. Grants issued under this program will be strictly risk-based and carefully targeted at creating or reinforcing specific capabilities in the communities surrounding nuclear facilities.
- **Buffer Zone Plans (BZPs).** BZPs identify and recommend security measures and local law enforcement coordination for the area surrounding a facility (the "Buffer Zone"), making it more difficult for a potential attacker to conduct surveillance, or to plan or launch an attack.
- **Radiological Emergency Preparedness (REP) Program.** The REP Program provides oversight of radiological emergency planning and preparedness for nuclear facilities. REP leads offsite emergency planning and reviews, and evaluates radiological emergency response plans and procedures developed by State and local governments. This program serves to enhance planning, preparedness, and response for all types of peacetime radiological emergencies with Federal, State, and local governments and the private sector.
- **Atomic Energy Act.** This statute ensures proper management of the Nation's atomic energy by providing a program for government control of the possession, use, and production of atomic energy and special nuclear materials, whether owned by the government or the private sector. The Act assigns control of special nuclear materials, source materials, and byproduct materials to the NRC. It requires that civilian uses of nuclear materials and facilities be licensed, and it empowers the NRC to establish and enforce standards to govern the use of such materials. While Nuclear Reactors, Materials, and Waste Sector facilities are largely run by private companies, the NRC is charged with ensuring that the facilities are being operated according to NRC rules and regulations.

Homeland Security

For questions or more information, please contact NIPP@dhs.gov or visit www.dhs.gov/nipp.